SEQUENCE LISTING

<110> Horvitz, H. Robert
Davison, Ewa M.
Lu, Xiaowei

<120> A Tumor Suppressor Pathway in C. Elegans

<130> 01997/536002

<150> US 60/208,802
<151> 2000-06-02

<160> 78

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 386
<212> PRT
<213> Caenorhabditis elegans

<400> 1

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Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
            20                  25                  30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
        35                  40                  45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
    50                  55                  60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65                  70                  75                  80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
                85                  90                  95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
            100                 105                 110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
        115                 120                 125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
    130                 135                 140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
145                 150                 155                 160
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
                165                 170                 175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
            180                 185                 190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
        195                 200                 205
Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
    210                 215                 220
Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
225                 230                 235                 240
Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
                245                 250                 255
Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
            260                 265                 270
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Arg Ile Ala Phe Ser Gln Gln Tyr Gly Gly Gly Gly Ser Pro Ala Val
        275                 280                 285
Gln Lys Pro Val Thr Phe Ser Ala Gln Pro Ala Pro Ala Pro Val Arg
    290                 295                 300
Glu Ala Pro Ser Pro Val Val Glu Asn Val Ser Ser Ser Ser Phe Thr
305                 310                 315                 320
Pro Lys Pro Pro Ala Met Ile Asn Asn Phe Gly Glu Glu Met Asn Gln
                325                 330                 335
Ile Thr Tyr Gln Ala Ile Arg Ile Ala Arg Glu Gln Pro Glu Arg Leu
            340                 345                 350
Lys Leu Leu Arg Lys Ala Leu Phe Asp Val Val Leu Ala Phe Asp Gln
        355                 360                 365
Lys Glu Tyr Ala Asp Val Gly Asp Leu Tyr Arg Asp Leu Ala Gln Lys
    370                 375                 380
Asn Ser
385
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<210> 2
<211> 1276
<212> DNA
<213> Caenorhabditis elegans

<400> 2
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gtacttctcg acggaaaagt acatcgcact gagcaaagat gagaaattca aatttgatga 180
ttacgatgtg aatgatgaga cgctgaaaaa agtggtgctc aacgagattg gcaagtgccc 240
ggatatttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
atgcggaaag gacaatctcc gaaaccggct tcgcgtggca attgtaagca agcggcttac 420
accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
tcgagactat acacaacgct gggaggccga cttgttgaaa gatttggacg tggtgctcgg 540
gctcgaggct cggcgagcat cgaaaaatat ggaaaaggtg gattctgggg agctcatgga 600
gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
ggagacaggg tccaattgga gcgatccggc gccggaacca tcccaatcca aatcccagtc 720
cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
tgacgatttc tatcaagagg aacatgaatc cgcatcaaac gccatgtatc ggatcgcttt 840
ctcacagcag tacggtggcg gcgggtcccc agccgtgcag aagcccgtca cttttagtgc 900
tcagccggcg ccggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
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aataacatac caagcgatcc gtattgcccg agagcagccg gaacgtctga aattgctccg 1080
taaggcactt ttcgacgttg tcctggcgtt tgatcagaag gaatacgccg atgttgggga 1140
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<210> 3
<211> 322
<212> PRT
<213> Caenorhabditis elegans

<400> 3
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Val Arg Leu Leu Ala Glu Phe Ile Glu Lys Thr Gly Gln Asn Ala Thr
            20                  25                  30
Ile Val Asn Met Asp Ser Phe Leu Glu Phe Phe Ala Tyr Leu Asn Pro
        35                  40                  45
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Thr Ala Pro Ile Pro Thr Val Pro Glu Ile Glu Lys Gln Leu Leu Leu
    50                  55                  60
Lys Ser Pro Ile Arg Cys Ile Val Cys Gly Met Glu Thr Glu Ser Asp
65                  70                  75                  80
Ser Ala Val Thr Leu Ser Ile Asp Asn Ala Ser Ile Ile Leu Thr Ala
                85                  90                  95
Thr Val Ile Gly Tyr Cys Arg Asp Pro Ser Asp Ala Val Asn Gln Ile
            100                 105                 110
Arg Lys Glu Ser Leu Arg Ala Cys Thr Lys His Phe Asn Ser Ile Phe
        115                 120                 125
His Val Ile Phe Glu Gly Leu Gln Ile Glu Asn Thr Tyr Cys Ala His
    130                 135                 140
His Ala Lys Tyr Ser Leu Ala Asn Arg Trp Cys Lys Val Tyr Thr Met
145                 150                 155                 160
Ile Arg Ser Ser Leu Gly Glu Gln Phe Thr Lys Phe Asp Val Arg Asn
                165                 170                 175
Phe Lys Ser Ile Leu Gln Ser Phe Leu Asp Thr Phe Gly Glu Ile Asp
            180                 185                 190
Asp Asp Lys Lys Asp Lys Glu Ser Ser His Phe Asp Glu Cys Phe Glu
        195                 200                 205
Glu Met Asp Ser Glu Asn Val Glu Ile Lys Met Glu Ser Pro Gln Glu
    210                 215                 220
Glu Ala Ala Glu Lys Ser Lys Phe Ser Glu Asn Leu Val Glu Val Lys
225                 230                 235                 240
Leu Glu Pro Ile Glu Thr His Glu Leu Asp Lys Thr Ile Ser Asp Phe
                245                 250                 255
Ser Ser Ser Asp Ile Ile Asp Ser Ser Gln Lys Leu Gln Gln Asn Gly
            260                 265                 270
Phe Pro Glu Lys Val Glu Gln Met Asp Lys Tyr Ser Asn Lys Leu Lys
        275                 280                 285
Asp Glu Ala Ser Asp Lys Lys Tyr Glu Lys Pro Gly Lys Lys Asp Tyr
    290                 295                 300
Val Glu Glu Glu Gly Tyr Trp Ala Pro Ile Thr Asp Ser Glu Asp Asp
305                 310                 315                 320
Glu Ala
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<210> 4
<211> 1108
<212> DNA
<213> Caenorhabditis elegans

<400> 4
gcaaaaaact agatattttg tggcattttt acaattaaaa aacctttaaa aaatggatca 60
ccatgctatg taccgaaccg ctgaattcaa caaaactact gtccgattat tggcggaatt 120
catcgaaaag actgggcaga atgcgacgat agtgaatatg gacagctttt tggagttctt 180
tgcgtatttg aatcccacgg ctccaattcc aacggttcca gaaattgaaa aacaattatt 240
gctaaaatca ccgattcgtt gcattgtgtg tggaatggaa actgaatcag attccgcagt 300
gacattaagc atcgataatg cttcaattat tctcacagcg acagtaattg gttactgtag 360
agatccaagt gatgcagtta atcaaattcg aaaggagagt cttcgagcat gcacgaaaca 420
tttcaacagt attttccatg tcatcttcga aggactgcaa atcgagaaca cctactgtgc 480
tcatcatgca aaatacagtc ttgccaatcg ttggtgcaaa gtctacacga tgattcgatc 540
ttccctgggc gagcagttca caaagttcga tgtgcgcaat tttaaatcaa tattgcaatc 600
atttttggat acttttggtg aaattgatga cgacaaaaag gataaagaat cttctcattt 660
tgatgaatgt tttgaagaaa tggattcaga aaacgtagaa attaaaatgg agagcccaca 720
agaagaagct gcagagaaat cgaagttttc tgaaaaccta gtggaggtaa aactggaacc 780
aattgaaact catgaacttg acaaaactat atccgacttt tcttcaagtg atataattga 840
ttcgtcccaa aaactgcagc aaaatggttt tcctgaaaaa gtggagcaaa tggacaaata 900

tagcaacaaa ttgaaagatg aagcttcaga caaaaagtat gaaaagccag gaaaaaagga 960
ctacgttgaa gaagagggat actgggcgcc gatcaccgac agcgaggatg atgaagcctg 1020
aatttattta atcaaacgtt ttggaaattt tttttgtttt tgtcaataaa accatataac 1080
aataaaaaaa aaaaaaaaaa aactcgag 1108

<210> 5
<211> 498
<212> PRT
<213> Caenorhabditis elegans

<400> 5

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 1               5                  10                  15
Lys Leu Asp Lys Thr Tyr Leu Trp Glu Ser Tyr Leu His Gln Phe Glu
            20                  25                  30
Lys Gly Lys Thr Ser Phe Ile Pro Val Glu Ala Phe Asn Arg Asn Leu
        35                  40                  45
Thr Val Asn Phe Asn Glu Cys Val Lys Glu Gly Val Ile Phe Glu Thr
    50                  55                  60
Val Val His Asp Tyr Asp Lys Asn Cys Asp Ser Ile Gln Val Arg Trp
65                  70                  75                  80
Phe Ala Arg Ile Glu Lys Val Cys Gly Tyr Arg Val Leu Ala Gln Phe
                85                  90                  95
Ile Gly Ala Asp Thr Lys Phe Trp Leu Asn Ile Leu Ser Asp Asp Met
            100                 105                 110
Phe Gly Leu Ala Asn Ala Ala Met Ser Asp Pro Asn Met Asp Lys Ile
        115                 120                 125
Val Tyr Ala Pro Pro Leu Ala Ile Asn Glu Glu Tyr Gln Asn Asp Met
    130                 135                 140
Val Asn Tyr Val Asn Asn Cys Ile Asp Gly Glu Ile Val Gly Gln Thr
145                 150                 155                 160
Ser Leu Ser Pro Lys Phe Asp Glu Gly Lys Ala Leu Leu Ser Lys His
                165                 170                 175
Arg Phe Lys Val Gly Gln Arg Leu Glu Leu Leu Asn Tyr Ser Asn Ser
            180                 185                 190
Thr Glu Ile Arg Val Ala Arg Ile Gln Glu Ile Cys Gly Arg Arg Met
        195                 200                 205
Asn Val Ser Ile Thr Lys Lys Asp Phe Pro Glu Ser Leu Pro Asp Ala
    210                 215                 220
Asp Asp Asp Arg Gln Val Phe Ser Ser Gly Ser Gln Tyr Trp Ile Asp
225                 230                 235                 240
Glu Gly Ser Phe Phe Ile Phe Pro Val Gly Phe Ala Ala Val Asn Gly
                245                 250                 255
Tyr Gln Leu Asn Ala Lys Lys Glu Tyr Ile Glu His Thr Asn Lys Ile
            260                 265                 270
Ala Gln Ala Ile Lys Asn Gly Glu Asn Pro Arg Tyr Asp Ser Asp Asp
        275                 280                 285
Val Thr Phe Asp Gln Leu Ala Lys Asp Pro Ile Asp Pro Met Ile Trp
    290                 295                 300
Arg Lys Val Lys Val Gly Gln Lys Phe Glu Leu Ile Asp Pro Leu Ala
305                 310                 315                 320
Gln Gln Phe Asn Asn Leu His Val Ala Ser Ile Leu Lys Phe Cys Lys
                325                 330                 335
Thr Glu Gly Tyr Leu Ile Val Gly Met Asp Gly Pro Asp Ala Leu Glu
            340                 345                 350
Asp Ser Phe Pro Ile His Ile Asn Asn Thr Phe Met Phe Pro Val Gly
        355                 360                 365
Tyr Ala Glu Lys Tyr Asn Leu Glu Leu Val Pro Pro Asp Glu Phe Lys
    370                 375                 380
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```
Gly Thr Phe Arg Trp Asp Glu Tyr Leu Glu Lys Glu Ser Ala Glu Thr
385                 390                 395                 400
Leu Pro Leu Asp Leu Phe Lys Pro Met Pro Ser Gln Glu Arg Leu Asp
                405                 410                 415
Lys Phe Lys Val Ile Leu Ile Ser Lys Arg Val Gly Leu Arg Leu Glu
            420                 425                 430
Ala Ala Asp Met Cys Glu Asn Gln Phe Ile Cys Pro Ala Thr Val Lys
        435                 440                 445
Ser Val His Gly Arg Leu Ile Asn Val Asn Phe Asp Gly Trp Asp Glu
    450                 455                 460
Glu Phe Asp Glu Leu Tyr Asp Val Asp Ser His Asp Ile Leu Pro Ile
465                 470                 475                 480
Gly Trp Cys Glu Ala His Ser Tyr Val Leu Gln Pro Pro Lys Lys Tyr
                485                 490                 495
Asn Tyr
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<210> 6
<211> 1497
<212> DNA
<213> Caenorhabditis elegans

<400> 6
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gttgaagcat tcaatcgtaa ccttacagtt aattttaacg aatgcgtgaa ggaaggagtt 180
atcttcgaaa cagtggtcca tgattatgac aagaactgcg attcgattca agtcagatgg 240
tttgcacgaa ttgaaaaagt ttgcggatac agagttctgg ctcagtttat cggagctgac 300
acgaaatttt ggctcaatat tttatcggac gatatgtttg gtttggcaaa cgccgcaatg 360
agtgatccca atatggataa aattgtatat gctccgccgc ttgcaatcaa cgaagaatac 420
caaaatgata tggtaaatta tgtaaataat tgcattgatg gcgaaatcgt cggccaaact 480
tcgctgtctc caaaattcga tgaagggaag gctctcctaa gcaagcatcg tttcaaagtt 540
ggacaacgtc ttgaactatt aaattattcc aattctactg aaatacgcgt agcgcgaatt 600
caagaaatat gtggacgacg aatgaatgta tctatcacaa agaaagactt tcccgaatcg 660
cttccagatg cagatgacga cagacaagtc tttagctctg gatctcaata ttggatagac 720
gagggaagct tcttcatatt tcctgttgga tttgcagcag tcaatggata tcaactaaat 780
gcgaaaaagg aatatattga gcacacaaat aaaattgctc aagcaataaa aaatggagaa 840
aatccaagat atgactcaga cgacgtcaca tttgatcaat tagcaaaaga tccaattgat 900
cccatgattt ggagaaaagt taaggttgga caaaagtttg agctcatcga ccccttggct 960
cagcaattca ataacctcca cgtcgcttcg attctcaaat tttgcaaaac tgaaggatat 1020
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aatacattta tgttcccagt tggttatgcg gaaaagtata atttggaact tgttccgcca 1140
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ctaccgcttg acttgttcaa gccaatgcct tcccaagaga gattagacaa atttaaggta 1260
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tttatttgtc cagctacagt gaaatcagtt catggaagac tgataaatgt caatttcgac 1380
ggctgggatg aagaatttga tgaactgtat gatgtggact cccatgatat tctaccgata 1440
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<210> 7
<211> 100
<212> PRT
<213> Artificial Sequence

<220>
<223> derived from Caenorhabditis elegans, Drosophila
melanogaster, Mus musculus and Homo sapiens

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Val Glu Leu Phe Asp Lys Gln Pro Val Asp Ser Pro Pro Asn Gly Phe
20 25 30
Lys Val Gly Met Lys Leu Glu Ala Val Asp Pro Arg Asn Pro Ser Leu
35 40 45
Ile Cys Val Ala Thr Val Val Glu Val Lys Gly Tyr Arg Leu Leu Leu
50 55 60
His Phe Asp Gly Trp Asp Asp Arg Tyr Asp Phe Trp Cys Asp Ala Asp
65 70 75 80
Ser Pro Asp Ile Phe Pro Val Gly Trp Cys Glu Lys Asn Gly His Pro
85 90 95
Leu Gln Pro Pro
100

<210> 8
<211> 100
<212> PRT
<213> Drosophila melanogaster

<400> 8
Trp Ser Trp Glu Ser Tyr Leu Glu Glu Gln Lys Ala Ile Thr Ala Pro
1 5 10 15
Val Ser Leu Phe Asp Ser Gln Ala Val Thr His Asn Lys Asn Gly Phe
20 25 30
Lys Leu Gly Met Lys Leu Glu Gly Ile Asp Pro Gln His Pro Ser Met
35 40 45
Tyr Phe Ile Leu Thr Val Ala Glu Val Cys Gly Tyr Arg Leu Arg Leu
50 55 60
His Phe Asp Gly Tyr Ser Glu Cys His Asp Phe Trp Val Asn Ala Asn
65 70 75 80
Ser Pro Asp Ile His Pro Ala Gly Trp Phe Glu Lys Thr Gly His Lys
85 90 95
Leu Gln Leu Pro
100

<210> 9
<211> 100
<212> PRT
<213> Drosophila melanogaster

<400> 9
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1 5 10 15
Lys His Met Phe Val Ser Gln Ser His Ser Pro Pro Pro Leu Gly Phe
20 25 30
Gln Val Gly Met Lys Leu Glu Ala Val Asp Arg Met Asn Pro Ser Leu
35 40 45
Val Cys Val Ala Ser Val Thr Asp Val Val Asp Ser Arg Phe Leu Val
50 55 60
His Phe Asp Asn Trp Asp Asp Thr Tyr Asp Tyr Trp Cys Asp Pro Ser
65 70 75 80
Ser Pro Tyr Ile His Pro Val Gly Trp Cys Gln Lys Gln Gly Lys Pro
85 90 95
Leu Thr Pro Pro
100

<210> 10
<211> 96
<212> PRT
<213> Drosophila melanogaster

<400> 10
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Thr Trp Ala Phe Lys Val Arg Pro Pro His Ser Phe Leu Val Asn Met
            20   25   30
Lys Leu Glu Ala Val Asp Arg Arg Asn Pro Ala Leu Ile Arg Val Ala
        35   40   45
Ser Val Glu Asp Val Glu Asp His Arg Ile Lys Ile His Phe Asp Gly
    50   55   60
Trp Ser His Gly Tyr Asp Phe Trp Ile Asp Ala Asp His Pro Asp Ile
65   70   75   80
His Pro Ala Gly Trp Cys Ser Lys Thr Gly His Pro Leu Gln Pro Pro
                85   90   95

<210> 11
<211> 99
<212> PRT
<213> Drosophila melanogaster

<400> 11
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 1   5   10   15
Ile His Leu Phe Leu Asn Pro Phe Pro Ile Ser Pro Asn Cys Phe Glu
            20   25   30
Ile Gly Met Lys Leu Glu Ala Ile Asp Pro Glu Asn Cys Ser Leu Phe
        35   40   45
Cys Val Cys Ser Ile Val Glu Val Arg Gly Tyr Arg Leu Lys Leu Ser
    50   55   60
Phe Asp Gly Tyr Ser Ser Met Tyr Asp Phe Trp Val Asn Ala Asp Ser
65   70   75   80
Gln Asp Ile Phe Pro Pro Gly Trp Cys Asp Glu Thr Ala Arg Val Leu
                85   90   95
Gln Ala Pro

<210> 12
<211> 100
<212> PRT
<213> Drosophila melanogaster

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 1   5   10   15
Arg Ala Leu Phe Asn Met Gln Gln Gln Met Asp Val Arg Asn Gly Phe
            20   25   30
Ala Val Gly Met His Leu Glu Ala Glu Asp Leu Asn Asp Thr Gly Lys
        35   40   45
Ile Cys Val Ala Thr Val Thr Asp Ile Leu Asp Glu Arg Ile Arg Val
    50   55   60
His Phe Asp Gly Trp Asp Asp Cys Tyr Asp Leu Trp Val His Ile Thr
65   70   75   80

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Ser Pro Tyr Ile His Pro Cys Gly Trp His Glu Gly Arg Gln Gln Leu
                85                  90                  95
Ile Val Pro Pro
            100


<210> 13
<211> 96
<212> PRT
<213> Drosophila melanogaster

<400> 13
Phe Ile Trp Asp Asp Tyr Ile Ser Glu Val Gly Gly Met Ala Ala Ser
 1               5                  10                  15
Lys Glu Leu Phe Thr Pro Arg Gln Pro Met Glu Tyr Gln Glu Arg Met
            20                  25                  30
Lys Leu Glu Val Val Asp Gln Arg Asn Pro Cys Leu Ile Arg Pro Ala
        35                  40                  45
Thr Val Val Thr Arg Lys Gly Tyr Arg Val Gln Leu His Leu Asp Cys
    50                  55                  60
Trp Pro Thr Glu Tyr Tyr Phe Trp Leu Glu Asp Asp Ser Pro Asp Leu
65                  70                  75                  80
His Pro Ile Gly Trp Cys Glu Ala Thr Ser His Glu Leu Glu Thr Pro
                85                  90                  95


<210> 14
<211> 99
<212> PRT
<213> Mus musculus

<400> 14
Phe Thr Trp Asp Lys Tyr Leu Lys Glu Thr Cys Ser Val Pro Ala Pro
 1               5                  10                  15
Val His Cys Phe Lys Gln Ser Tyr Thr Pro Pro Ser Asn Glu Phe Lys
            20                  25                  30
Ile Ser Met Lys Leu Glu Ala Gln Asp Pro Arg Asn Thr Thr Ser Thr
        35                  40                  45
Cys Ile Ala Thr Val Val Gly Leu Thr Gly Ala Arg Leu Arg Leu Arg
    50                  55                  60
Leu Asp Gly Ser Asp Asn Lys Asn Asp Phe Trp Arg Leu Val Asp Ser
65                  70                  75                  80
Ser Glu Ile Gln Pro Ile Gly Asn Cys Glu Lys Asn Gly Gly Met Leu
                85                  90                  95
Gln Pro Pro


<210> 15
<211> 100
<212> PRT
<213> Homo sapiens

<400> 15
Ser Ser Trp Pro Met Phe Leu Thr Leu Asn Gly Ser Glu Met Ala Ser
 1               5                  10                  15
Ala Thr Leu Phe Lys Lys Glu Pro Pro Lys Pro Pro Leu Asn Asn Phe
            20                  25                  30
Lys Val Gly Met Lys Leu Glu Ala Ile Asp Lys Lys Asn Pro Tyr Leu
```

```
        35                  40                  45
Ile Cys Pro Ala Thr Ile Gly Asp Val Lys Gly Asp Glu Val His Ile
    50                  55                  60
Thr Phe Asp Gly Trp Ser Gly Ala Phe Asp Tyr Trp Cys Lys Tyr Asp
65                  70                  75                  80
Ser Arg Asp Ile Phe Pro Ala Gly Trp Cys Arg Leu Thr Gly Asp Val
                85                  90                  95
Leu Gln Pro Pro
            100
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<210> 16
<211> 1276
<212> DNA
<213> Caenorhabditis elegans

<400> 16

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gtacttctcg acggaaaagt acatcgcact gagcaaagat gagaaattca aatttgatga 180
ttacgatgtg aatgatgaga cgctgaaaaa agtggtgctc aacgagattg gcaagtgccc 240
ggatatttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
atgcggaaag gacaatctcc gaaaccggct tcgcgtggca attgtaagca agcggcttac 420
accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
tcgagactat acacaacgct gggaggccga cttgttgaaa gatttggacg tggtgctcgg 540
gctcgaggct cggcgagcat cgaaaaatat ggaaaaggtg gattctgggg agctcatgga 600
gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
ggagacaggg tccaattgga gcgatccggc gccggaacca tcccaatcca aatcccagtc 720
cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
tgacgatttc tatcaagagg aacatgaatc cgcatcaaac gccatgtatc ggatcgcttt 840
ctcacagcag tacggtggcg gcgggtcccc agccgtgcag aagcccgtca cttttagtgc 900
tcagccggcg ccggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
atcgagtttc accccgaagc ccccggccat gatcaacaat tttggtgagg agatgaacca 1020
aataacatac caagcgatcc gtattgcccg agagcagccg gaacgtctga aattgctccg 1080
taaggcactt ttcgacgttg tcctggcgtt tgatcagaag gaatacgccg atgttgggga 1140
tttgtacagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
ttaatttatt tcaatttttg ttacatgttc caatataata aacaggtgct tgtttaaaaa 1260
aaaaaaaaaa aaaaaa                                                 1276
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<210> 17
<211> 386
<212> PRT
<213> Caenorhabditis elegans

<400> 17

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Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
 1               5                  10                  15
Phe Tyr Lys Pro Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
            20                  25                  30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
        35                  40                  45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
    50                  55                  60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65                  70                  75                  80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
                85                  90                  95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
```

```
            100                 105                 110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
        115                 120                 125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
    130                 135                 140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
145                 150                 155                 160
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
                165                 170                 175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
            180                 185                 190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
        195                 200                 205
Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
    210                 215                 220
Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
225                 230                 235                 240
Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
                245                 250                 255
Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
            260                 265                 270
Arg Ile Ala Phe Ser Gln Gln Tyr Gly Gly Gly Gly Ser Pro Ala Val
        275                 280                 285
Gln Lys Pro Val Thr Phe Ser Ala Gln Pro Ala Pro Ala Pro Val Arg
    290                 295                 300
Glu Ala Pro Ser Pro Val Val Glu Asn Val Ser Ser Ser Ser Phe Thr
305                 310                 315                 320
Pro Lys Pro Pro Ala Met Ile Asn Asn Phe Gly Glu Glu Met Asn Gln
                325                 330                 335
Ile Thr Tyr Gln Ala Ile Arg Ile Ala Arg Glu Gln Pro Glu Arg Leu
            340                 345                 350
Lys Leu Leu Arg Lys Ala Leu Phe Asp Val Val Leu Ala Phe Asp Gln
        355                 360                 365
Lys Glu Tyr Ala Asp Val Gly Asp Leu Tyr Arg Asp Leu Ala Gln Lys
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Asn Ser
385
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<210> 18
<211> 1276
<212> DNA
<213> Caenorhabditis elegans

<400> 18

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gtacttctcg acggaaaagt acatcgcact gagcaaagat gagaaattca aatttgatga 180
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ggatatttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
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accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
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gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
ggagacaggg tccaattgga gcgatccggc gccggaacca tcccaatcca aatcccagtc 720
cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
tgacgatttc tatcaagagg aacatgaatc cgcatcaaac gccatgtatc ggatcgcttt 840
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<210> 19
<211> 386
<212> PRT
<213> Caenorhabditis elegans

<400> 19

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Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
            20                  25                  30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
        35                  40                  45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
    50                  55                  60
Lys Lys Val Met Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65                  70                  75                  80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
                85                  90                  95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
            100                 105                 110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
        115                 120                 125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
    130                 135                 140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
145                 150                 155                 160
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
                165                 170                 175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
            180                 185                 190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
        195                 200                 205
Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
    210                 215                 220
Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
225                 230                 235                 240
Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
                245                 250                 255
Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
            260                 265                 270
Arg Ile Ala Phe Ser Gln Gln Tyr Gly Gly Gly Gly Ser Pro Ala Val
        275                 280                 285
Gln Lys Pro Val Thr Phe Ser Ala Gln Pro Ala Pro Ala Pro Val Arg
    290                 295                 300
Glu Ala Pro Ser Pro Val Val Glu Asn Val Ser Ser Ser Ser Phe Thr
305                 310                 315                 320
Pro Lys Pro Pro Ala Met Ile Asn Asn Phe Gly Glu Glu Met Asn Gln
                325                 330                 335
Ile Thr Tyr Gln Ala Ile Arg Ile Ala Arg Glu Gln Pro Glu Arg Leu
            340                 345                 350
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Lys Leu Leu Arg Lys Ala Leu Phe Asp Val Val Leu Ala Phe Asp Gln
        355                 360                 365
Lys Glu Tyr Ala Asp Val Gly Asp Leu Tyr Arg Asp Leu Ala Gln Lys
    370                 375                 380
Asn Ser
385
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<210> 20
<211> 1276
<212> DNA
<213> Caenorhabditis elegans

<400> 20

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gtacttctcg acggaaaagt acatcgcact gagcaaagat gagaaattca aatttgatga 180
ttacgatgtg aatgatgaga cgctgaaaaa agtggtgctc aacgagattg gcaagtgccc 240
ggatatttag agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
atgcggaaag gacaatctcc gaaaccggct tcgcgtggca attgtaagca agcggcttac 420
accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
tcgagactat acacaacgct gggaggccga cttgttgaaa gatttggacg tggtgctcgg 540
gctcgaggct cggcgagcat cgaaaaatat ggaaaaggtg gattctgggg agctcatgga 600
gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
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tgacgatttc tatcaagagg aacatgaatc cgcatcaaac gccatgtatc ggatcgcttt 840
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tcagccggcg ccggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
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<210> 21
<211> 78
<212> PRT
<213> Caenorhabditis elegans

<400> 21

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Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
 1               5                  10                  15
Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
            20                  25                  30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
        35                  40                  45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
    50                  55                  60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile
65                  70                  75
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<210> 22
<211> 1276
<212> DNA
<213> Caenorhabditis elegans

<400> 22
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gtacttctcg acggaaaagt acatcgcact gagcaaagat gagaaattca aatttgatga 180
ttacgatgtg aatgatgaga cgctgaaaaa agtggtgctc aacgagattg gcaagtgccc 240
ggatatttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaat aaatctacaa 360
atgcggaaag gacaatctcc gaaaccggct tcgcgtggca attgtaagca agcggcttac 420
accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
tcgagactat acacaacgct gggaggccga cttgttgaaa gatttggacg tggtgctcgg 540
gctcgaggct cggcgagcat cgaaaaatat ggaaaaggtg gattctgggg agctcatgga 600
gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
ggagacaggg tccaattgga gcgatccggc gccggaacca tcccaatcca aatcccagtc 720
cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
tgacgatttc tatcaagagg aacatgaatc cgcatcaaac gccatgtatc ggatcgcttt 840
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ttaatttatt tcaatttttg ttacatgttc caatataata aacaggtgct tgtttaaaaa 1260
aaaaaaaaaa aaaaaa 1276

<210> 23
<211> 112
<212> PRT
<213> Caenorhabditis elegans

<400> 23
Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
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Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
            20   25   30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
        35   40   45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
    50   55   60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65   70   75   80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
                85   90   95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
            100   105   110

<210> 24
<211> 1276
<212> DNA
<213> Caenorhabditis elegans

<400> 24
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gtacttctcg acggaaaagt acatcgcact gagcaaagat gagaaattca aatttgatga 180
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tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
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accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
tcgagactat acacaacgct gggaggccga cttgttgaaa gatttggacg tggtgctcgg 540
gctcgaggct cggcgagcat cgaaaaatat ggaaaaggtg gattctgggg agctcatgga 600
gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
ggagacaggg tccaattgga gcgatccggc gccggaacca tcccaatcca aatcccagtc 720
cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
tgacgatttc tatcaagagg aacatgaatc cgcatcaaac gccatgtatc ggatcgcttt 840
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ttaatttatt tcaatttttg ttacatgttc caatataata aacaggtgct tgtttaaaaa 1260
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<210> 25
<211> 386
<212> PRT
<213> Caenorhabditis elegans

<400> 25
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Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
            20   25   30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
        35   40   45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
    50   55   60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65   70   75   80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
                85   90   95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
            100   105   110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu His Val
        115   120   125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
    130   135   140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
145   150   155   160
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
                165   170   175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
            180   185   190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
        195   200   205
Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
    210   215   220
Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
225   230   235   240
Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
                245   250   255
Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
            260   265   270
Arg Ile Ala Phe Ser Gln Gln Tyr Gly Gly Gly Gly Ser Pro Ala Val
        275   280   285
Gln Lys Pro Val Thr Phe Ser Ala Gln Pro Ala Pro Ala Pro Val Arg

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    290                 295                 300
Glu Ala Pro Ser Pro Val Val Glu Asn Val Ser Ser Ser Ser Phe Thr
305                 310                 315                 320
Pro Lys Pro Pro Ala Met Ile Asn Asn Phe Gly Glu Glu Met Asn Gln
                325                 330                 335
Ile Thr Tyr Gln Ala Ile Arg Ile Ala Arg Glu Gln Pro Glu Arg Leu
            340                 345                 350
Lys Leu Leu Arg Lys Ala Leu Phe Asp Val Val Leu Ala Phe Asp Gln
        355                 360                 365
Lys Glu Tyr Ala Asp Val Gly Asp Leu Tyr Arg Asp Leu Ala Gln Lys
    370                 375                 380
Asn Ser
385
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<210> 26
<211> 1276
<212> DNA
<213> Caenorhabditis elegans

<400> 26

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gtacttctcg acggaaaagt acatcgcact gagcaaagat gagaaattca aatttgatga 180
ttacgatgtg aatgatgaga cgctgaaaaa agtggtgctc aacgagattg gcaagtgccc 240
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tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
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accggcccaa gtagaggcct atatgtggca ctgggagttt tacggcttta ttcgctacta 480
tcgagactat acacaacgct gggaggccga cttgttgaaa gatttggacg tggtgctcgg 540
gctcgaggct cggcgagcat cgaaaaatat ggaaaaggtg gattctgggg agctcatgga 600
gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
ggagacaggg tccaattgga gcgatccggc gccggaacca tcccaatcca aatcccagtc 720
cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
tgacgatttc tatcaagagg aacatgaatc cgcatcaaac gccatgtatc ggatcgcttt 840
ctcacagcag tacggtggcg gcgggtcccc agccgtgcag aagcccgtca cttttagtgc 900
tcagccggcg ccggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
atcgagtttc accccgaagc ccccggccat gatcaacaat tttggtgagg agatgaacca 1020
aataacatac caagcgatcc gtattgcccg agagcagccg gaacgtctga aattgctccg 1080
taaggcactt ttcgacgttg tcctggcgtt tgatcagaag gaatacgccg atgttgggga 1140
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<210> 27
<211> 386
<212> PRT
<213> Caenorhabditis elegans

<400> 27

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 1               5                  10                  15
Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
            20                  25                  30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
        35                  40                  45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
    50                  55                  60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
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65 70 75 80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
85 90 95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
100 105 110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
115 120 125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
130 135 140
Trp His Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
145 150 155 160
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
165 170 175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
180 185 190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
195 200 205
Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
210 215 220
Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
225 230 235 240
Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
245 250 255
Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
260 265 270
Arg Ile Ala Phe Ser Gln Gln Tyr Gly Gly Gly Gly Ser Pro Ala Val
275 280 285
Gln Lys Pro Val Thr Phe Ser Ala Gln Pro Ala Pro Ala Pro Val Arg
290 295 300
Glu Ala Pro Ser Pro Val Val Glu Asn Val Ser Ser Ser Ser Phe Thr
305 310 315 320
Pro Lys Pro Pro Ala Met Ile Asn Asn Phe Gly Glu Glu Met Asn Gln
325 330 335
Ile Thr Tyr Gln Ala Ile Arg Ile Ala Arg Glu Gln Pro Glu Arg Leu
340 345 350
Lys Leu Leu Arg Lys Ala Leu Phe Asp Val Val Leu Ala Phe Asp Gln
355 360 365
Lys Glu Tyr Ala Asp Val Gly Asp Leu Tyr Arg Asp Leu Ala Gln Lys
370 375 380
Asn Ser
385

<210> 28
<211> 1276
<212> DNA
<213> Caenorhabditis elegans

<400> 28
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ttacgatgtg aatgatgaga cgctgaaaaa agtggtgctc aacgagattg gcaagtgccc 240
ggatatttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
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gctcgaggct cggcgagcat cgaaaaatat ggaaaaggtg gattctgggg agctcatgga 600

gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
ggagacaggg tccaattgga gcgatccggc gccggaacca tcccaatcca aatcccagtc 720
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tgacgatttc tatcaagagg aacatgaatc cgcatcaaac gccatgtatc ggatcgcttt 840
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tcagccggcg ccggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
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taaggcactt ttcgacgttg tcctggcgtt tgatcagaag gaatacgccg atgttgggga 1140
tttgtacagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
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aaaaaaaaaa aaaaaa 1276

<210> 29
<211> 146
<212> PRT
<213> Caenorhabditis elegans

<400> 29
Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
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Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
            20   25   30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
        35   40   45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
    50   55   60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65   70   75   80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
                85   90   95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
            100   105   110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
        115   120   125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
    130   135   140
Trp Arg
145

<210> 30
<211> 1276
<212> DNA
<213> Caenorhabditis elegans

<400> 30
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<210> 31
<211> 386
<212> PRT
<213> Caenorhabditis elegans

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            20   25   30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
        35   40   45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
    50   55   60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65   70   75   80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
                85   90   95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
            100   105   110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
        115   120   125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
    130   135   140
Trp Arg Trp Lys Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
145   150   155   160
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
                165   170   175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
            180   185   190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
        195   200   205
Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
    210   215   220
Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
225   230   235   240
Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
                245   250   255
Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
            260   265   270
Arg Ile Ala Phe Ser Gln Gln Tyr Gly Gly Gly Gly Ser Pro Ala Val
        275   280   285
Gln Lys Pro Val Thr Phe Ser Ala Gln Pro Ala Pro Ala Pro Val Arg
    290   295   300
Glu Ala Pro Ser Pro Val Val Glu Asn Val Ser Ser Ser Ser Phe Thr
305   310   315   320
Pro Lys Pro Pro Ala Met Ile Asn Asn Phe Gly Glu Glu Met Asn Gln
                325   330   335

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Ile Thr Tyr Gln Ala Ile Arg Ile Ala Arg Glu Gln Pro Glu Arg Leu
            340                 345                 350
Lys Leu Leu Arg Lys Ala Leu Phe Asp Val Val Leu Ala Phe Asp Gln
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Asn Ser
385
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<210> 32
<211> 1276
<212> DNA
<213> Caenorhabditis elegans

<400> 32

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tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
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cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
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tcagccggcg ccggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
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<210> 33
<211> 386
<212> PRT
<213> Caenorhabditis elegans

<400> 33

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Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
            20                  25                  30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
        35                  40                  45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
    50                  55                  60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65                  70                  75                  80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
                85                  90                  95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
            100                 105                 110
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Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
        115                 120                 125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
    130                 135                 140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Cys Tyr Tyr Arg Asp Tyr Thr
145                 150                 155                 160
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
                165                 170                 175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
            180                 185                 190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
        195                 200                 205
Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
    210                 215                 220
Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
225                 230                 235                 240
Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
                245                 250                 255
Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
            260                 265                 270
Arg Ile Ala Phe Ser Gln Gln Tyr Gly Gly Gly Gly Ser Pro Ala Val
        275                 280                 285
Gln Lys Pro Val Thr Phe Ser Ala Gln Pro Ala Pro Ala Pro Val Arg
    290                 295                 300
Glu Ala Pro Ser Pro Val Val Glu Asn Val Ser Ser Ser Ser Phe Thr
305                 310                 315                 320
Pro Lys Pro Pro Ala Met Ile Asn Asn Phe Gly Glu Glu Met Asn Gln
                325                 330                 335
Ile Thr Tyr Gln Ala Ile Arg Ile Ala Arg Glu Gln Pro Glu Arg Leu
            340                 345                 350
Lys Leu Leu Arg Lys Ala Leu Phe Asp Val Val Leu Ala Phe Asp Gln
        355                 360                 365
Lys Glu Tyr Ala Asp Val Gly Asp Leu Tyr Arg Asp Leu Ala Gln Lys
    370                 375                 380
Asn Ser
385
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<210> 34
<211> 1276
<212> DNA
<213> Caenorhabditis elegans

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<210> 35
<211> 162
<212> PRT
<213> Caenorhabditis elegans

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Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
35 40 45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
50 55 60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65 70 75 80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
85 90 95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
100 105 110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
115 120 125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
130 135 140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
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<210> 36
<211> 1276
<212> DNA
<213> Caenorhabditis elegans

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gtacttctcg acggaaaagt acatcgcact gagcaaagat gagaaattca aatttgatga 180
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<210> 37
<211> 386
<212> PRT
<213> Caenorhabditis elegans

<400> 37
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            20   25   30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
        35   40   45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
    50   55   60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65   70   75   80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
                85   90   95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
            100   105   110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
        115   120   125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
    130   135   140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
145   150   155   160
Gln Arg Trp Lys Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
                165   170   175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
            180   185   190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
        195   200   205
Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
    210   215   220
Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
225   230   235   240
Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
                245   250   255
Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
            260   265   270
Arg Ile Ala Phe Ser Gln Gln Tyr Gly Gly Gly Gly Ser Pro Ala Val
        275   280   285
Gln Lys Pro Val Thr Phe Ser Ala Gln Pro Ala Pro Ala Pro Val Arg
    290   295   300
Glu Ala Pro Ser Pro Val Val Glu Asn Val Ser Ser Ser Ser Phe Thr
305   310   315   320
Pro Lys Pro Pro Ala Met Ile Asn Asn Phe Gly Glu Glu Met Asn Gln
                325   330   335
Ile Thr Tyr Gln Ala Ile Arg Ile Ala Arg Glu Gln Pro Glu Arg Leu
            340   345   350
Lys Leu Leu Arg Lys Ala Leu Phe Asp Val Val Leu Ala Phe Asp Gln

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Lys Glu Tyr Ala Asp Val Gly Asp Leu Tyr Arg Asp Leu Ala Gln Lys
    370                 375                 380
Asn Ser
385
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<210> 38
<211> 1275
<212> DNA
<213> Caenorhabditis elegans

<400> 38

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<210> 39
<211> 325
<212> PRT
<213> Caenorhabditis elegans

<400> 39

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            20                  25                  30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
        35                  40                  45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
    50                  55                  60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65                  70                  75                  80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
                85                  90                  95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
            100                 105                 110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
        115                 120                 125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
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    130                 135                 140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
145                 150                 155                 160
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
                165                 170                 175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Trp Ile Leu Gly
            180                 185                 190
Ser Ser Trp Ser Pro Trp Ser Pro Trp Ile Leu Gln Trp Met Arg Cys
        195                 200                 205
Ala Ser Arg Arg Ser Pro Thr Arg Arg Gln Gly Pro Ile Gly Ala Ile
    210                 215                 220
Arg Arg Arg Asn His Pro Asn Pro Asn Pro Ser Pro Gln Lys Pro Ser
225                 230                 235                 240
Thr Leu Lys Pro Thr Tyr Tyr Leu Arg Arg Thr Lys Ser Thr Ile Leu
                245                 250                 255
Thr Ile Ser Ile Lys Arg Asn Met Asn Pro His Gln Thr Pro Cys Ile
            260                 265                 270
Gly Ser Leu Ser His Ser Ser Thr Val Ala Ala Gly Pro Gln Pro Cys
        275                 280                 285
Arg Ser Pro Ser Leu Leu Val Leu Ser Arg Arg Arg Arg Gln Leu Glu
    290                 295                 300
Arg Pro Gln Ala Gln Leu Trp Arg Met Leu Val His Arg Val Ser Pro
305                 310                 315                 320
Arg Ser Pro Arg Pro
                325
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<210> 40
<211> 1276
<212> DNA
<213> Caenorhabditis elegans

<400> 40

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<210> 41
<211> 278
<212> PRT

<213> Caenorhabditis elegans

<400> 41

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            20                  25                  30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
        35                  40                  45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
    50                  55                  60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65                  70                  75                  80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
                85                  90                  95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
            100                 105                 110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
        115                 120                 125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
    130                 135                 140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
145                 150                 155                 160
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
                165                 170                 175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
            180                 185                 190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
        195                 200                 205
Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
    210                 215                 220
Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
225                 230                 235                 240
Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
                245                 250                 255
Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
            260                 265                 270
Arg Ile Ala Phe Ser Gln
        275
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<210> 42
<211> 1276
<212> DNA
<213> Caenorhabditis elegans

<400> 42

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agaatctgcc aaaatgtcaa agataaagac acattccact ggctcaaaac ggacggtacc 60
attctacaag ctgccaccgc ccgtgccact tccaccactc ccgccacccg atccaacccg 120
gtacttctcg acggaaaagt acatcgcact gagcaaagat gagaaattca aatttgatga 180
ttacgatgtg aatgatgaga cgctgaaaaa agtggtgctc aacgagattg gcaagtgccc 240
ggatatttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
atgcggaaag gacaatctcc gaaaccggct tcgcgtggca attgtaagca agcggcttac 420
accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
tcgagactat acacaacgct gggaggccga cttgttgaaa gatttggacg tggtgctcgg 540
gctcgaggct cggcgagcat cgaaaaatat ggaaaaggtg gattctgggg agctcatgga 600
gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
ggagacaggg tccaattgga gcgatccggc gccggaacca tcccaatcca aatcccagtc 720
```

cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
tgacgatttc tatcaagagg aacatgaatc cgcatcaaac gccatgtatc ggatcgcttt 840
ctcacagcag tacggtggcg gcgggtcccc agccgtgcag aagcccgtca cttttagtgc 900
tcagccggcg ccggcgccag tttgagaggc cccaagccca gttgtggaga atgttagttc 960
atcgagtttc accccgaagc ccccggccat gatcaacaat tttggtgagg agatgaacca 1020
aataacatac caagcgatcc gtattgcccg agagcagccg gaacgtctga aattgctccg 1080
taaggcactt ttcgacgttg tcctggcgtt tgatcagaag gaatacgccg atgttgggga 1140
tttgtacagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
ttaatttatt tcaatttttg ttacatgttc caatataata aacaggtgct tgtttaaaaa 1260
aaaaaaaaaa aaaaaa 1276

<210> 43
<211> 303
<212> PRT
<213> Caenorhabditis elegans

<400> 43
Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
 1   5   10   15
Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
            20   25   30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
        35   40   45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
    50   55   60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65   70   75   80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
                85   90   95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
            100   105   110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
        115   120   125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
    130   135   140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
145   150   155   160
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
                165   170   175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
            180   185   190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
        195   200   205
Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
    210   215   220
Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
225   230   235   240
Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
                245   250   255
Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
            260   265   270
Arg Ile Ala Phe Ser Gln Gln Tyr Gly Gly Gly Gly Ser Pro Ala Val
        275   280   285
Gln Lys Pro Val Thr Phe Ser Ala Gln Pro Ala Pro Ala Pro Val
    290   295   300

<210> 44
<211> 1276

<212> DNA
<213> Caenorhabditis elegans

<400> 44
agaatctgcc aaaatgtcaa agataaagac acattccact ggctcaaaac ggacggtacc 60
attctacaag ctgccaccgc ccgtgccact tccaccactc ccgccacccg atccaacccg 120
gtacttctcg acggaaaagt acatcgcact gagcaaagat gagaaattca aatttgatga 180
ttacgatgtg aatgatgaga cgctgaaaaa agtggtgctc aacgagattg gcaagtgccc 240
ggatatttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
atgcggaaag gacaatctcc gaaaccggct tcgcgtggca attgtaagca agcggcttac 420
accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
tcgagactat acacaacgct gggaggccga cttgttgaaa gatttggacg tggtgctcgg 540
gctcgaggct cggcgagcat cgaaaaatat ggaaaaggtg gattctgggg agctcatgga 600
gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
ggagacaggg tccaattgga gcgatccggc gccggaacca tcccaatcca aatcccagtc 720
cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
tgacgatttc tatcaagagg aacatgaatc cgcatcaaac gccatgtatc ggatcgcttt 840
ctcacagcag tacggtggcg gcgggtcccc agccgtgcag aagcccgtca cttttagtgc 900
tcagccggcg ccggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
atcgagtttc accccgaagc ccccggccat gatcaacaat tttggtgagg agatgaacca 1020
aataacatac taagcgatcc gtattgcccg agagcagccg gaacgtctga aattgctccg 1080
taaggcactt ttcgacgttg tcctggcgtt tgatcagaag gaatacgccg atgttgggga 1140
tttgtacagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
ttaatttatt tcaatttttg ttacatgttc caatataata aacaggtgct tgtttaaaaa 1260
aaaaaaaaaa aaaaaa 1276

<210> 45
<211> 339
<212> PRT
<213> Caenorhabditis elegans

<400> 45
Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
 1   5   10   15
Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
            20   25   30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
        35   40   45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
    50   55   60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65   70   75   80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
                85   90   95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
            100   105   110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
        115   120   125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
    130   135   140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
145   150   155   160
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
                165   170   175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
            180   185   190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
        195   200   205

```
Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
    210                 215                 220
Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
225                 230                 235                 240
Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
                245                 250                 255
Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
            260                 265                 270
Arg Ile Ala Phe Ser Gln Gln Tyr Gly Gly Gly Gly Ser Pro Ala Val
        275                 280                 285
Gln Lys Pro Val Thr Phe Ser Ala Gln Pro Ala Pro Ala Pro Val Arg
    290                 295                 300
Glu Ala Pro Ser Pro Val Val Glu Asn Val Ser Ser Ser Ser Phe Thr
305                 310                 315                 320
Pro Lys Pro Pro Ala Met Ile Asn Asn Phe Gly Glu Glu Met Asn Gln
                325                 330                 335
Ile Thr Tyr
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<210> 46
<211> 1276
<212> DNA
<213> Caenorhabditis elegans

<400> 46
agaatctgcc aaaatgtcaa agataaagac acattccact ggctcaaaac ggacggtacc 60
attctacaag ctgccaccgc ccgtgccact tccaccactc ccgccacccg atccaacccg 120
gtacttctcg acggaaaagt acatcgcact gagcaaagat gagaaattca aatttgatga 180
ttacgatgtg aatgatgaga cgctgaaaaa agtggtgctc aacgagattg gcaagtgccc 240
ggatatttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
atgcggaaag gacaatctcc gaaaccggct tcgcgtggca attgtaagca agcggcttac 420
accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
tcgagactat acacaacgct gggaggccga cttgttgaaa gatttggacg tggtgctcgg 540
gctcgaggct cggcgagcat cgaaaaatat ggaaaaggtg gattctgggg agctcatgga 600
gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
ggagacaggg tccaattgga gcgatccggc gccggaacca tcccaatcca aatcccagtc 720
cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
tgacgatttc tatcaagagg aacatgaatc cgcatcaaac gccatgtatc ggatcgcttt 840
ctcacagcag tacggtggcg gcgggtcccc agccgtgcag aagcccgtca cttttagtgc 900
tcagccggcg ccggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
atcgagtttc accccgaagc ccccggccat gatcaacaat tttggtgagg agatgaacca 1020
aataacatac caagcgatcc gtattgcccg aaagcagccg gaacgtctga aattgctccg 1080
taaggcactt ttcgacgttg tcctggcgtt tgatcagaag gaatacgccg atgttgggga 1140
tttgtacagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
ttaatttatt tcaatttttg ttacatgttc caatataata aacaggtgct tgtttaaaaa 1260
aaaaaaaaaa aaaaaa 1276

<210> 47
<211> 386
<212> PRT
<213> Caenorhabditis elegans

<400> 47
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Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
 1               5                  10                  15
Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
            20                  25                  30
```

```
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
        35                  40                  45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
    50                  55                  60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65                  70                  75                  80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
                85                  90                  95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Ser Ile Lys Ser Leu Lys
            100                 105                 110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
        115                 120                 125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
    130                 135                 140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
145                 150                 155                 160
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
                165                 170                 175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
            180                 185                 190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
        195                 200                 205
Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
    210                 215                 220
Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
225                 230                 235                 240
Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
                245                 250                 255
Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
            260                 265                 270
Arg Ile Ala Phe Ser Gln Gln Tyr Gly Gly Gly Gly Ser Pro Ala Val
        275                 280                 285
Gln Lys Pro Val Thr Phe Ser Ala Gln Pro Ala Pro Ala Pro Val Arg
    290                 295                 300
Glu Ala Pro Ser Pro Val Val Glu Asn Val Ser Ser Ser Ser Phe Thr
305                 310                 315                 320
Pro Lys Pro Pro Ala Met Ile Asn Asn Phe Gly Glu Glu Met Asn Gln
                325                 330                 335
Ile Thr Tyr Gln Ala Ile Arg Ile Ala Arg Lys Gln Pro Glu Arg Leu
            340                 345                 350
Lys Leu Leu Arg Lys Ala Leu Phe Asp Val Val Leu Ala Phe Asp Gln
        355                 360                 365
Lys Glu Tyr Ala Asp Val Gly Asp Leu Tyr Arg Asp Leu Ala Gln Lys
    370                 375                 380
Asn Ser
385
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<210> 48
<211> 1108
<212> DNA
<213> Caenorhabditis elegans

<400> 48
gcaaaaaact agatattttg tggcattttt acaattaaaa aacctttaaa aaatggatca 60
ccatgctatg taccgaaccg ctgaattcaa caaaactact gtccgattat tggcggaatt 120
catcgaaaag actgggcaga atgcgacgat agtgaatatg gacagctttt tggagttctt 180
tgcgtatttg aatcccacgg ctccaattcc aacggttcca gaaattgaaa aataattatt 240
gctaaaatca ccgattcgtt gcattgtgtg tggaatggaa actgaatcag attccgcagt 300

gacattaagc atcgataatg cttcaattat tctcacagcg acagtaattg gttactgtag 360
agatccaagt gatgcagtta atcaaattcg aaaggagagt cttcgagcat gcacgaaaca 420
tttcaacagt attttccatg tcatcttcga aggactgcaa atcgagaaca cctactgtgc 480
tcatcatgca aaatacagtc ttgccaatcg ttggtgcaaa gtctacacga tgattcgatc 540
ttccctgggc gagcagttca caaagttcga tgtgcgcaat tttaaatcaa tattgcaatc 600
atttttggat acttttggtg aaattgatga cgacaaaaag gataaagaat cttctcattt 660
tgatgaatgt tttgaagaaa tggattcaga aaacgtagaa attaaaatgg agagcccaca 720
agaagaagct gcagagaaat cgaagttttc tgaaaaccta gtggaggtaa aactggaacc 780
aattgaaact catgaacttg acaaaactat atccgacttt tcttcaagtg atataattga 840
ttcgtcccaa aaactgcagc aaaatggttt tcctgaaaaa gtggagcaaa tggacaaata 900
tagcaacaaa ttgaaagatg aagcttcaga caaaaagtat gaaaagccag gaaaaaagga 960
ctacgttgaa gaagagggat actgggcgcc gatcaccgac agcgaggatg atgaagcctg 1020
aatttattta atcaaacgtt ttggaaattt tttttgtttt tgtcaataaa accatataac 1080
aataaaaaaa aaaaaaaaaa aactcgag 1108

<210> 49
<211> 60
<212> PRT
<213> Caenorhabditis elegans

<400> 49
Met Asp His His Ala Met Tyr Arg Thr Ala Glu Phe Asn Lys Thr Thr
1 5 10 15
Val Arg Leu Leu Ala Glu Phe Ile Glu Lys Thr Gly Gln Asn Ala Thr
20 25 30
Ile Val Asn Met Asp Ser Phe Leu Glu Phe Phe Ala Tyr Leu Asn Pro
35 40 45
Thr Ala Pro Ile Pro Thr Val Pro Glu Ile Glu Lys
50 55 60

<210> 50

<400> 50
000

<210> 51
<211> 60
<212> PRT
<213> Caenorhabditis elegans

<400> 51
Arg Cys Ile Val Cys Gly Met Glu Thr Glu Ser Asp Ser Ala Val Thr
1 5 10 15
Leu Ser Ile Asp Asn Ala Ser Ile Ile Leu Thr Ala Thr Val Ile Gly
20 25 30
Tyr Cys Arg Asp Pro Ser Asp Ala Val Asn Gln Ile Arg Lys Glu Ser
35 40 45
Leu Arg Ala Cys Thr Lys His Phe Asn Ser Ile Phe
50 55 60

<210> 52
<211> 60
<212> PRT
<213> Caenorhabditis elegans

<400> 52
Pro Cys Ile Leu Cys Glu Lys Ala Leu Leu Met Arg Glu Ser Ile Ala

```
 1               5                  10                  15
Met Thr Asp Asn Glu Ala Val Lys Val Leu Met Ala Ala Val Met Ser
            20                  25                  30
Gly His Phe Arg Met Ala Thr Ala Glu Lys Ala Ile Arg His Glu Arg
        35                  40                  45
Leu Arg Met Cys Tyr Asp His Val Asp Phe Val Tyr
    50                  55                  60
```

<210> 53
<211> 60
<212> PRT
<213> Caenorhabditis elegans

<400> 53

```
Pro Cys Ile Ile Cys Gly Asn Glu Val Pro Gly His Arg Ser Ile Arg
 1               5                  10                  15
Val Ser Asp Asp Asp Ala Ala Ile Phe Leu Thr Ala Ala Val Leu Thr
            20                  25                  30
Asp Gln Lys Thr Ile Arg Gln Ala Lys Arg Asp Ile Leu Ser Glu Tyr
        35                  40                  45
Leu Thr Val Cys Leu Arg His Ser Leu His Tyr Tyr
    50                  55                  60
```

<210> 54
<211> 60
<212> PRT
<213> Caenorhabditis elegans

<400> 54

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Pro Cys Leu Val Cys Asn Gln Gln Met Glu Met Thr Lys Val Arg Ser
 1               5                  10                  15
Val Asn Asn Thr Asp Ala Tyr Ile Met Ile Tyr Val Cys Val Met Asn
            20                  25                  30
Asp Lys Tyr Asp Met Asp Lys Ala Lys Glu Leu Ala Arg Met Gln Arg
        35                  40                  45
Phe Lys Cys Cys Val Ser His Leu Asp Glu Leu Tyr
    50                  55                  60
```

<210> 55
<211> 177
<212> PRT
<213> Caenorhabditis elegans

<400> 55

```
Met Leu Ser Ile Lys Gln Glu Leu Leu Asp Ala Pro Pro Pro Pro Pro
 1               5                  10                  15
Ala Ala Thr Pro Leu Pro Pro Ile Thr His Arg Ile Ser Leu Ser Gly
            20                  25                  30
Tyr Arg Asn Ile His Ala Lys Ser Phe Leu Lys Thr Met Thr Met Asp
        35                  40                  45
Leu Cys Val Arg Arg Val Val Leu Ser Leu Leu Glu Asn Arg Arg Ala
    50                  55                  60
Leu Trp Ile Arg Val His Lys Ser Pro Lys Ala Asp Trp Glu Val Leu
65                  70                  75                  80
Gly Val Glu Val Phe Glu Arg Thr Gly Lys Ala Val Ser Val Lys Gln
                85                  90                  95
```

```
Leu Gln Arg Ile Phe Leu Thr Ala Arg Asp Trp Leu Arg Arg Asn Leu
            100                 105                 110
Gln Leu Tyr Ile Ile Gln Arg Lys Met Asp Lys Leu Thr Leu Asp Ala
        115                 120                 125
Glu Leu Ala Lys Trp Glu Leu Tyr Pro His Phe Ile Tyr Tyr Arg Gln
    130                 135                 140
Tyr Leu Gly Gln Phe Glu Ala His Leu Arg Gly Glu Glu Trp Thr Gly
145                 150                 155                 160
Glu Leu Tyr Asp Asp Asp Ile Ile Cys Asp Gly Ile Met Gln Val Glu
                165                 170                 175
Val
```

<210> 56
<211> 75
<212> PRT
<213> Caenorhabditis elegans

<400> 56

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Glu Asp Ser Val Ser Tyr Thr Lys Ile Thr Glu Asp Leu Leu Gln Lys
 1               5                  10                  15
Lys Pro His Lys His Arg Phe Ile Arg Gln Ala Leu Phe Lys Thr Ile
            20                  25                  30
Met Ala Leu Asp Asp Asp Glu Val Glu Tyr Thr Glu Leu Ala Asp Leu
        35                  40                  45
Phe Gly Asp Ile Ala Glu Gln Ser Asn Val Val Arg Arg Leu Arg Leu
    50                  55                  60
Gln Arg Gln Gln Gln Arg Gly Arg Gly Glu Gln
65                  70                  75
```

<210> 57
<211> 178
<212> PRT
<213> Caenorhabditis elegans

<400> 57

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Met Ser Leu Ile Lys Gln Glu His Met His Pro Pro Pro Arg Ala Ile
 1               5                  10                  15
Thr Pro Leu Pro Pro Ala Thr His Gln Ile Thr Leu Glu Glu Tyr Lys
            20                  25                  30
Glu Arg Glu Lys Lys Asp Tyr Tyr Arg Asp Ala Thr Lys Asp Ala Ser
        35                  40                  45
Val Lys Lys Val Val Leu Ser Leu Leu Lys Asp His Pro Gly Met Trp
    50                  55                  60
Gln Asn Gly Asn Arg Phe Gln Pro Glu Lys Trp Arg Ala Leu Gly Val
65                  70                  75                  80
Asp Val Tyr Gln Arg Thr Gly Gln Ile Val Arg Val Asn Asp Met Arg
                85                  90                  95
Lys Met Leu Val Met Gly Lys Ser Val Leu Lys Lys Lys Ile Ala Ile
            100                 105                 110
Cys Ile Arg Asp Lys Lys Leu Asp Arg Ala Ala Thr Glu Lys Asp Leu
        115                 120                 125
Trp Tyr Trp Glu Tyr Tyr Arg His Phe Leu Tyr Tyr Arg Glu Thr Leu
    130                 135                 140
Gly Gln Phe Glu Ala Asn Leu Arg Gly Glu Glu Trp Thr Gly Glu Asp
145                 150                 155                 160
Gln Ile Gln Asp Glu Asp Asp Ile Ile Tyr Asp Gly Met Leu Asp Gly
```

```
                165                 170                 175
Asp Leu


<210> 58
<211> 73
<212> PRT
<213> Caenorhabditis elegans

<400> 58
Arg Ser Ala Gln His Ile Ala Glu Gln Ala Lys Arg Leu Phe Leu Gln
 1               5                  10                  15
Tyr Pro Glu Lys Ser Asn Leu Ile Arg Glu Thr Met Phe Lys Thr Ile
            20                  25                  30
Leu Ala Phe Asp Asp Pro Ser Ala Asp Tyr Gln Asn Val Gly Glu Ile
        35                  40                  45
Phe Asp Asp Leu Ala Ala Gln Glu Ala Ala Lys Lys Arg Lys Arg Ala
    50                  55                  60
Glu Asn Arg Ala Gln Arg Glu Gln Gln
65                  70


<210> 59
<211> 179
<212> PRT
<213> Caenorhabditis elegans

<400> 59
Met Ser Leu Ile Lys Gln Glu His Met Asn Pro Pro Pro Arg Thr Ile
 1               5                  10                  15
Thr Pro Leu Pro Pro Pro Thr His Gln Ile Thr Ile Glu Glu Tyr Lys
            20                  25                  30
Glu Arg Val Lys Arg Asp Tyr Tyr Arg Asn Ala Thr Lys Asp Thr Ser
        35                  40                  45
Leu Lys Lys Val Val Leu Ser Leu Ile Lys Asp Arg Lys Ala Met Trp
    50                  55                  60
Ala Pro Ala Ala Lys Pro Ser Glu Asp Lys Trp Gln Lys Leu Gly Ala
65                  70                  75                  80
Glu Val Phe Ser Arg Thr Gly Lys Val Val Ser Val Thr Gln Leu Arg
                85                  90                  95
Arg Met Leu Val Ser Ser Lys His Val Leu Lys Thr Lys Met Ser His
            100                 105                 110
Cys Ile Lys Val Lys Lys Met Asp Arg Val Ser Thr Glu Ala Tyr Leu
        115                 120                 125
Trp Asn Trp Glu Phe Tyr Arg His Phe Leu Tyr Tyr Arg Glu Met Leu
    130                 135                 140
Asp Arg Phe Glu Ala Asn Leu Arg Gly Lys Gln Trp Thr Gly Glu Asp
145                 150                 155                 160
Gln Pro Thr Asp Asp Asp Asp Asp Ile Ile Cys Asp Gly Ile Phe Glu
                165                 170                 175
Val Glu Met


<210> 60
<211> 70
<212> PRT
<213> Caenorhabditis elegans
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<400> 60
Ser Thr Ala Glu Gln Ile Gly Glu Glu Ile Asp Arg Leu Ile Gln Leu
 1   5   10   15
Tyr Pro Gln Arg Glu Met Leu Ile Arg Gln Ala Phe Phe Lys Thr Ile
            20   25   30
Phe Ala Leu Glu Asp Glu Thr Val Glu Phe Ser Asn Leu Gly Asp Leu
        35   40   45
Phe Glu Asp Leu Ala Glu Gln Glu Asn Phe Lys Arg Arg Arg Arg Ser
    50   55   60
Arg Ala Gln Arg Leu Glu
65   70

<210> 61
<211> 187
<212> PRT
<213> Caenorhabditis elegans

<400> 61
Met Leu Asn Ile Lys Gln Glu Gly Val Val Ala Asp Ala Pro Arg Ala
 1   5   10   15
Leu Thr Pro Ile Pro Pro Phe Ile His His Val Ser Met Glu Glu Tyr
            20   25   30
Met Gly Met Glu Leu Asn Ser Val Tyr Glu Glu Ala Thr Lys Asp Ser
        35   40   45
Ala Leu Lys Lys Val Val Leu Asp Leu Leu Lys Asp Arg Pro Gly Met
    50   55   60
Trp Gln Asn Gly Asn Arg Phe Gln Leu Glu Asn Trp Arg Glu Leu Gly
65   70   75   80
Val Asp Val Tyr Gln Arg Thr Gly Gln Ile Val Arg Ala Glu Leu Gly
                85   90   95
Glu Val Ser Val Asn Asp Met His Arg Met Phe Val Val Gly Lys Ala
            100   105   110
Val Leu Lys Gln Lys Ile Thr Val Cys Ile Arg Tyr Lys Lys Leu Asp
        115   120   125
Arg Ala Ala Thr Glu Ala Asp Leu Gln Asn Trp Glu Phe Tyr Arg His
    130   135   140
Phe Arg Tyr Tyr Arg Glu Thr Leu Gly Gln Phe Glu Ala Asn Leu Arg
145   150   155   160
Gly Glu Gln Trp Thr Gly Glu Asp Gln Pro Ala Asp Asp Asp Asp Asp
                165   170   175
Ile Ile Tyr Asp Gly Ile Phe Glu Val Glu Met
            180   185

<210> 62
<211> 69
<212> PRT
<213> Caenorhabditis elegans

<400> 62
Ser Thr Ala Glu Gln Ile Gly Glu Glu Ile Asp Arg Leu Ile Gln Leu
 1   5   10   15
Tyr Pro Gln Arg Glu Met Leu Ile Arg Gln Ala Phe Phe Lys Thr Ile
            20   25   30
Phe Ala Leu Glu Asp Glu Thr Val Glu Phe Ser Asn Leu Gly Asp Leu
        35   40   45
Phe Glu Asp Leu Ala Glu Gln Glu Asn Phe Lys Arg Arg Arg Arg Ser
    50   55   60

Ala Gln Arg Leu Glu
65

<210> 63
<211> 186
<212> PRT
<213> Caenorhabditis elegans

<400> 63
Met Met Asn Pro Lys Glu Glu Pro Arg Pro Phe Ser Ile Val Pro Leu
1 5 10 15
Pro Arg Pro Pro Arg Pro Thr Thr Pro Leu Pro Pro Ile Ser His Cys
20 25 30
Ile Thr Met Ala Asp Tyr Leu Leu Leu Glu Asn Thr Lys Phe His Lys
35 40 45
Thr Ala Thr Arg Ala Pro Lys Ile Lys Lys Val Leu Leu Ser Leu Leu
50 55 60
Lys Asp Arg Pro Glu Ile Trp Asp Arg Lys Ala Gln Phe Ser Ala Lys
65 70 75 80
Asn Trp Gln Asn Leu Gly Val Glu Val Tyr Glu Arg Thr Gly Tyr Ile
85 90 95
Val Arg Ser Asn Asp Leu His Lys Met Leu Arg Thr Ala Lys Val Val
100 105 110
Leu Lys Asn Lys Leu Arg Thr Cys Ile Gly Ile Lys Lys Leu Asp Arg
115 120 125
Ala Ala Thr Glu Thr Glu Leu Trp Lys Trp Glu Tyr Tyr Pro His Phe
130 135 140
Ile Tyr Tyr Arg Glu Thr Leu Gly His Phe Glu Ala Asn Leu Arg Gly
145 150 155 160
Glu Pro Trp Asp Gly Glu Ala His Ile Asp Asp Asp Asp Asp Asp Ile
165 170 175
Ile Tyr Glu Gly Tyr Trp Glu Ala Asp Lys
180 185

<210> 64
<211> 70
<212> PRT
<213> Caenorhabditis elegans

<400> 64
Asn Ser Ala Gln His Ile Gly Glu Gln Val His Arg Leu Phe Ala Gln
1 5 10 15
Tyr Pro Glu Arg Ser Lys Leu Phe Arg Glu Thr Leu Phe Lys Thr Ile
20 25 30
Leu Ala Leu Glu Glu Pro Glu Tyr Glu His Ala Ala Glu Val Phe Thr
35 40 45
Asp Leu Ala Gln Ser Glu Thr Ala Lys Arg Arg Arg Arg Ser Glu Ala
50 55 60
Thr Trp Gln Asn Gly Gln
65 70

<210> 65
<211> 186
<212> PRT
<213> Caenorhabditis elegans

<400> 65
Met Val Ser Ala Thr Arg Val Pro Arg Arg Ser Ser Thr Thr Thr Ser
 1   5   10   15
Ala Thr Ala Gln Gln Arg Thr Pro Ser Pro Leu Met Pro Ala Ser Phe
            20   25   30
Pro Ile Thr Met Asp Glu Tyr Leu Glu Lys Glu Asn Arg Glu Phe Val
        35   40   45
Val Asn Ala Ser Lys Asp Ile Ala Met Lys Lys Leu Ala Leu Thr Leu
    50   55   60
Leu Glu Leu Tyr Pro Glu Met Trp Lys Pro Gly Gly Pro Met Val Ala
65   70   75   80
Lys Lys Trp Gln Ala Phe Gly Ala Glu Met Tyr Arg Arg Thr Gly Lys
                85   90   95
Ile Tyr Arg Cys Lys Asp Leu His Ser Val Phe Thr Leu Thr Lys Ser
            100   105   110
Ser Ile Lys Arg Lys Leu Arg Thr Cys Ile Leu Ile Lys Arg Met His
        115   120   125
Arg Ser Lys Thr Asp Glu Glu Met Trp Lys Tyr Glu Leu Tyr Pro Tyr
    130   135   140
Phe Gln Tyr Tyr Arg Gln Ser Ile Gly Gln Phe Glu Ala Lys Leu Arg
145   150   155   160
Asp Glu Pro Trp Thr Gly Glu Asp Gln Ala Gln Glu Asp Asp Asp Ile
                165   170   175
Leu Phe Asp Gly Leu Phe Glu Val Glu Asn
            180   185

<210> 66
<211> 66
<212> PRT
<213> Caenorhabditis elegans

<400> 66
Lys Thr Ala Asp Asn Ile Gly Asp Gln Val Lys Gln Leu Phe Val Asp
 1   5   10   15
His Pro Asp Arg Ala Asn Phe Phe Arg Glu Val Leu Phe Lys Thr Val
            20   25   30
Leu Glu Leu Arg Asp Pro Ala Phe Thr Asn Ala Gly Val Phe Phe Asp
        35   40   45
Glu Met Ser Ser Leu Glu Ser Ala Lys Arg Arg Arg Arg Ser Glu Met
    50   55   60
Asn Lys
65

<210> 67
<211> 178
<212> PRT
<213> Caenorhabditis elegans

<400> 67
Met Ser Arg Ile Lys Gln Glu Gln Val Asn Pro Pro Pro Pro Pro Arg
 1   5   10   15
Ala Ile Thr Pro Leu Pro Pro Ala Thr His Arg Ile Thr Met Asp Glu
            20   25   30
Tyr Lys Lys Arg Glu Lys Lys Asp Tyr Tyr Arg Asp Ala Thr Lys Asp
        35   40   45
Ala Ser Val Lys Lys Val Val Leu Ser Leu Leu Lys Asp Tyr Pro Asp
    50   55   60

```
Met Trp Gln Asn Gly Asn Arg Phe Gln Thr Arg Lys Trp Arg Ala Leu
65                  70                  75                  80
Gly Val Glu Val Tyr Gln Arg Thr Gly Gln Ile Val Gly Val Asp Asp
                85                  90                  95
Met Arg Lys Met Phe Met Ser Gly Lys Thr Val Leu Lys Gln Lys Ile
            100                 105                 110
Thr Phe Cys Ile Arg Asn Met Lys Met Asp Arg Ala Ala Thr Glu Ala
        115                 120                 125
Asp Leu Gln Asn Trp Glu Tyr Tyr Arg His Phe Leu Tyr Tyr Arg Gln
    130                 135                 140
Thr Leu Gly Lys Phe Glu Ala Lys Leu Arg Gly Glu Gln Trp Ile Gly
145                 150                 155                 160
Glu Asp Gln Val Glu Asp Asp Asp Glu Asp Asp Val Ile Phe Asp Gly
                165                 170                 175
Glu Ser
```

<210> 68
<211> 410
<212> PRT
<213> Caenorhabditis elegans

<400> 68

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Met Gly Thr Cys Trp Gly Asp Ile Ser Glu Asn Val Arg Val Glu Val
 1               5                  10                  15
Pro Asn Thr Asp Cys Ser Leu Pro Thr Lys Val Phe Trp Ile Ala Gly
            20                  25                  30
Ile Val Lys Leu Ala Gly Tyr Asn Ala Leu Leu Arg Tyr Glu Gly Phe
        35                  40                  45
Glu Asn Asp Ser Gly Leu Asp Phe Trp Cys Asn Ile Cys Gly Ser Asp
    50                  55                  60
Ile His Pro Val Gly Trp Cys Ala Ala Ser Gly Lys Pro Leu Val Pro
65                  70                  75                  80
Pro Arg Thr Ile Gln His Lys Tyr Thr Asn Trp Lys Ala Phe Leu Val
                85                  90                  95
Lys Arg Leu Thr Gly Ala Lys Thr Leu Pro Pro Asp Phe Ser Gln Lys
            100                 105                 110
Val Ser Glu Ser Met Gln Tyr Pro Phe Lys Pro Cys Met Arg Val Glu
        115                 120                 125
Val Val Asp Lys Arg His Leu Cys Arg Thr Arg Val Ala Val Val Glu
    130                 135                 140
Ser Val Ile Gly Gly Arg Leu Arg Leu Val Tyr Glu Glu Ser Glu Asp
145                 150                 155                 160
Arg Thr Asp Asp Phe Trp Cys His Met His Ser Pro Leu Ile His His
                165                 170                 175
Ile Gly Trp Ser Arg Ser Ile Gly His Arg Phe Lys Arg Ser Asp Ile
            180                 185                 190
Thr Lys Lys Gln Asp Gly His Phe Thr Asp Pro Pro His Leu Phe Ala
        195                 200                 205
Lys Val Lys Glu Val Asp Gln Ser Gly Glu Trp Phe Lys Glu Gly Met
    210                 215                 220
Lys Leu Glu Ala Ile Asp Pro Leu Asn Leu Ser Thr Ile Cys Val Ala
225                 230                 235                 240
Thr Ile Lys Arg Val Leu Ala Asp Gly Phe Leu Met Ile Gly Ile Asp
                245                 250                 255
Gly Ser Glu Ala Ala Asp Gly Ser Asp Trp Phe Cys Tyr His Ala Thr
            260                 265                 270
Ser Pro Ser Ile Phe Pro Val Gly Phe Cys Glu Ile Asn Met Ile Glu
```

```
        275                 280                 285
Leu Thr Pro Pro Arg Gly Tyr Thr Lys Leu Pro Phe Lys Trp Phe Asp
    290                 295                 300
Tyr Leu Arg Glu Thr Gly Ser Ile Ala Ala Pro Val Lys Leu Phe Asn
305                 310                 315                 320
Lys Asp Val Pro Asn His Gly Phe Arg Val Gly Met Lys Leu Glu Ala
                325                 330                 335
Val Asp Leu Met Glu Pro Arg Leu Ile Cys Val Ala Thr Val Thr Arg
            340                 345                 350
Ile Ile His Arg Leu Leu Arg Ile His Phe Asp Gly Trp Glu Glu Glu
        355                 360                 365
Tyr Asp Gln Trp Val Asp Cys Glu Ser Pro Asp Leu Tyr Pro Val Gly
    370                 375                 380
Trp Cys Gln Leu Thr Gly Tyr Gln Leu Gln Pro Pro Ala Ser Gln Cys
385                 390                 395                 400
Lys Leu Val Tyr Arg Lys Gly Val Leu Leu
                405                 410
```

<210> 69
<211> 512
<212> PRT
<213> Caenorhabditis elegans

<400> 69

```
Met Asn Phe Ser Asn Lys Lys Val Ile Leu Lys Ala Phe Leu Ser Lys
 1               5                  10                  15
Asn Ile Ile Tyr Tyr Phe Gln Arg Gln Tyr Asn Tyr Lys Leu Glu Glu
            20                  25                  30
Ala Glu Tyr Arg Tyr Phe Thr Glu Glu Arg Leu Phe Tyr Arg Arg Arg
        35                  40                  45
Asn Pro Val Glu Lys Ile Ala Gln Arg Ile Pro Lys Pro Gln Ile Glu
    50                  55                  60
Gly Thr Phe Thr Trp Ser Asp Glu Leu Arg Cys Asn Tyr Asp Gly Asn
65                  70                  75                  80
Thr Gln Phe Leu Pro Val Glu Ala Leu Glu Gly Cys Leu Pro Leu Glu
                85                  90                  95
Lys Leu Asn Gln His Leu Lys Pro Gly Phe Arg Leu Glu Val Val Val
            100                 105                 110
Arg Pro Ser Leu Asp Pro Ser Ile Thr Thr Lys Ser Pro Glu Ile Arg
        115                 120                 125
Trp Phe Gly Glu Val Thr Ala Val Cys Gly Phe Tyr Val Ala Ile Lys
    130                 135                 140
Phe Val Gly Glu Leu Asn Arg Arg Pro Cys Trp Phe His Met Leu Ser
145                 150                 155                 160
Glu Asp Ile Phe Asp Ile Gly Ser Gly Leu Lys Gln Asp Pro Ala Met
                165                 170                 175
Lys Trp Leu Gln Tyr Arg Pro Leu Ser Leu Leu Lys Pro Met Gln Cys
            180                 185                 190
Pro Lys Phe Trp Arg Arg Gly Ser Thr Pro Ala Pro Pro Val Pro Arg
        195                 200                 205
Pro Thr Glu Glu Ile Leu Asp Glu Phe Gln Ala Glu Leu His Glu Asn
    210                 215                 220
Arg Ile Ser Glu Pro Lys Ile Phe Asp Gln Leu Arg His Leu Ala His
225                 230                 235                 240
Arg Pro Ser Arg Phe Arg Leu Asn Gln Arg Val Glu Leu Leu Asn Tyr
                245                 250                 255
Leu Glu Pro Thr Glu Ile Arg Val Ala Arg Ile Leu Arg Ile Leu Gly
            260                 265                 270
```

```
Arg Arg Leu Met Val Met Val Thr Ala Gln Asp Tyr Pro Glu Asp Leu
        275                 280                 285
Pro Ser Val Glu Ala Lys Asp Arg Gln Val Gln His Glu Asn Val Glu
    290                 295                 300
Phe Trp Val Asp Glu Ser Ser Phe Phe Leu Phe Pro Val Gly Phe Ala
305                 310                 315                 320
Met Ile Asn Gly Leu Arg Thr Lys Ala Thr Glu Gly Tyr Leu Glu His
                325                 330                 335
Ser Arg Arg Ile Ala Glu Gly Ser Gly Thr Glu Lys Leu Asn Leu Leu
            340                 345                 350
Lys Val Gly Gln Lys Phe Glu Leu Leu Asp Pro Leu Ser Asp Leu Arg
        355                 360                 365
Gln Ser Phe Cys Val Ala Thr Ile Arg Lys Ile Cys Lys Thr Pro Gly
    370                 375                 380
Phe Leu Ile Ile Ser Pro Asp Glu Thr Glu Ser Asp Asp Glu Ser Phe
385                 390                 395                 400
Pro Ile His Ile Asp Asn His Phe Met His Pro Val Gly Tyr Ala Glu
                405                 410                 415
Lys Phe Gly Ile Lys Leu Asp Arg Leu Ala Gly Thr Glu Pro Gly Lys
            420                 425                 430
Phe Lys Trp Glu Gly Tyr Leu Lys Glu Lys Gln Ala Glu Lys Ile Pro
        435                 440                 445
Asp Glu Met Leu Arg Pro Leu Pro Ser Lys Glu Arg Arg His Met Phe
    450                 455                 460
Glu Phe Gly Arg Val Leu Glu Ala Val Gly Gln Asn Glu Thr Tyr Trp
465                 470                 475                 480
Ile Ser Pro Ala Ser Val Glu Glu Val His Gly Arg Thr Val Leu Ile
                485                 490                 495
Glu Phe Gln Gly Trp Asp Ser Glu Phe Ser Glu Leu Tyr Asp Met Glu
            500                 505                 510
```

<210> 70
<211> 411
<212> PRT
<213> Caenorhabditis elegans

<400> 70

```
Met Ser Glu Phe Leu Lys Ile Val Arg Ala Asn Lys Lys Ser Asp Arg
 1               5                  10                  15
Lys Leu Asp Lys Thr Tyr Leu Trp Glu Ser Tyr Leu His Gln Phe Glu
            20                  25                  30
Lys Gly Lys Thr Ser Phe Ile Pro Val Glu Ala Phe Asn Arg Asn Leu
        35                  40                  45
Thr Val Asn Phe Asn Glu Cys Val Lys Glu Gly Val Ile Phe Glu Thr
    50                  55                  60
Val Val His Asp Tyr Asp Lys Asn Cys Asp Ser Ile Gln Val Arg Trp
65                  70                  75                  80
Phe Ala Arg Ile Glu Lys Val Cys Gly Tyr Arg Val Leu Ala Gln Phe
                85                  90                  95
Ile Gly Ala Asp Thr Lys Phe Trp Leu Asn Ile Leu Ser Asp Asp Met
            100                 105                 110
Phe Gly Leu Ala Asn Ala Ala Met Ser Asp Pro Asn Met Asp Lys Ile
        115                 120                 125
Val Tyr Ala Pro Pro Leu Ala Ile Asn Glu Glu Tyr Gln Asn Asp Met
    130                 135                 140
Val Asn Tyr Val Asn Asn Cys Ile Asp Gly Glu Ile Val Gly Gln Thr
145                 150                 155                 160
Ser Leu Ser Pro Lys Phe Asp Glu Gly Lys Ala Leu Leu Ser Lys His
```

```
                165                 170                 175
Arg Phe Lys Val Gly Gln Arg Leu Glu Leu Leu Asn Tyr Ser Asn Ser
            180                 185                 190
Thr Glu Ile Arg Val Ala Arg Ile Gln Glu Ile Cys Gly Arg Arg Met
        195                 200                 205
Asn Val Ser Ile Thr Lys Lys Asp Phe Pro Glu Ser Leu Pro Asp Ala
    210                 215                 220
Asp Asp Asp Arg Gln Val Phe Ser Ser Gly Ser Gln Tyr Trp Ile Asp
225                 230                 235                 240
Glu Gly Ser Phe Phe Ile Phe Pro Val Gly Phe Ala Ala Val Asn Gly
                245                 250                 255
Tyr Gln Leu Asn Ala Lys Lys Glu Tyr Ile Glu His Thr Asn Lys Ile
            260                 265                 270
Ala Gln Ala Ile Lys Asn Gly Glu Asn Pro Arg Tyr Asp Ser Asp Asp
        275                 280                 285
Val Thr Phe Asp Gln Leu Ala Lys Asp Pro Ile Asp Pro Met Ile Trp
    290                 295                 300
Arg Lys Val Lys Val Gly Gln Lys Phe Glu Leu Ile Asp Pro Leu Ala
305                 310                 315                 320
Gln Gln Phe Asn Asn Leu His Val Ala Ser Ile Leu Lys Phe Cys Lys
                325                 330                 335
Thr Glu Gly Tyr Leu Ile Val Gly Met Asp Gly Pro Asp Ala Leu Glu
            340                 345                 350
Asp Ser Phe Pro Ile His Ile Asn Asn Thr Phe Met Phe Pro Val Gly
        355                 360                 365
Tyr Ala Glu Lys Tyr Asn Leu Glu Leu Val Pro Pro Asp Glu Phe Lys
    370                 375                 380
Gly Thr Phe Arg Trp Asp Glu Tyr Leu Glu Lys Glu Ser Ala Glu Thr
385                 390                 395                 400
Leu Pro Leu Asp Leu Phe Lys Pro Met Pro Ser
                405                 410
```

<210> 71
<211> 498
<212> PRT
<213> Caenorhabditis elegans

<400> 71

```
Met Ser Glu Phe Leu Lys Ile Val Arg Ala Asn Lys Lys Ser Asp Arg
 1               5                  10                  15
Lys Leu Asp Lys Thr Tyr Leu Trp Glu Ser Tyr Leu His Gln Phe Glu
            20                  25                  30
Lys Gly Lys Thr Ser Phe Ile Pro Val Glu Ala Phe Asn Arg Asn Leu
        35                  40                  45
Thr Val Asn Phe Asn Glu Cys Val Lys Glu Gly Val Ile Phe Glu Thr
    50                  55                  60
Val Val His Asp Tyr Asp Lys Asn Cys Asp Ser Ile Gln Val Arg Trp
65                  70                  75                  80
Phe Ala Arg Ile Glu Lys Val Cys Gly Tyr Arg Val Leu Ala Gln Phe
                85                  90                  95
Ile Gly Ala Asp Thr Lys Phe Trp Leu Asn Ile Leu Ser Asp Asp Met
            100                 105                 110
Phe Gly Leu Ala Asn Ala Ala Met Ser Asp Pro Asn Met Asp Lys Ile
        115                 120                 125
Val Tyr Ala Pro Pro Leu Ala Ile Asn Glu Glu Tyr Gln Asn Asp Met
    130                 135                 140
Val Asn Tyr Val Asn Asn Cys Ile Asp Gly Glu Ile Val Gly Gln Thr
145                 150                 155                 160
```

```
Ser Leu Ser Pro Lys Phe Asp Glu Gly Lys Ala Leu Leu Ser Lys His
                165                 170                 175
Arg Phe Lys Val Gly Gln Arg Leu Glu Leu Leu Asn Tyr Ser Asn Ser
            180                 185                 190
Thr Glu Ile Arg Val Ala Arg Ile Gln Glu Ile Cys Gly Arg Arg Met
        195                 200                 205
Asn Val Ser Ile Thr Lys Lys Asp Phe Pro Glu Ser Leu Pro Asp Ala
    210                 215                 220
Asp Asp Asp Arg Gln Val Phe Ser Ser Gly Ser Gln Tyr Trp Ile Asp
225                 230                 235                 240
Glu Gly Ser Phe Phe Ile Phe Pro Val Gly Phe Ala Ala Val Asn Gly
                245                 250                 255
Tyr Gln Leu Asn Ala Lys Lys Glu Tyr Ile Glu His Thr Asn Lys Ile
            260                 265                 270
Ala Gln Ala Ile Lys Asn Gly Glu Asn Pro Arg Tyr Asp Ser Asp Asp
        275                 280                 285
Val Thr Phe Asp Gln Leu Ala Lys Asp Pro Ile Asp Pro Met Ile Trp
    290                 295                 300
Arg Lys Val Lys Val Gly Gln Lys Phe Glu Leu Ile Asp Pro Leu Ala
305                 310                 315                 320
Gln Gln Phe Asn Asn Leu His Val Ala Ser Ile Leu Lys Phe Cys Lys
                325                 330                 335
Thr Glu Gly Tyr Leu Ile Val Gly Met Asp Gly Pro Asp Ala Leu Glu
            340                 345                 350
Asp Asn Phe Pro Ile His Ile Asn Asn Thr Phe Met Phe Pro Val Gly
        355                 360                 365
Tyr Ala Glu Lys Tyr Asn Leu Glu Leu Val Pro Pro Asp Glu Phe Lys
    370                 375                 380
Gly Thr Phe Arg Trp Asp Glu Tyr Leu Glu Lys Glu Ser Ala Glu Thr
385                 390                 395                 400
Leu Pro Leu Asp Leu Phe Lys Pro Met Pro Ser Gln Glu Arg Leu Asp
                405                 410                 415
Lys Phe Lys Val Ile Leu Ile Ser Lys Arg Val Gly Leu Arg Leu Glu
            420                 425                 430
Ala Ala Asp Met Cys Glu Asn Gln Phe Ile Cys Pro Ala Thr Val Lys
        435                 440                 445
Ser Val His Gly Arg Leu Ile Asn Val Asn Phe Asp Gly Trp Asp Glu
    450                 455                 460
Glu Phe Asp Glu Leu Tyr Asp Val Asp Ser His Asp Ile Leu Pro Ile
465                 470                 475                 480
Gly Trp Cys Glu Ala His Ser Tyr Val Leu Gln Pro Pro Lys Lys Tyr
                485                 490                 495
Asn Tyr
```

<210> 72
<211> 498
<212> PRT
<213> Caenorhabditis elegans

<400> 72

```
Met Ser Glu Phe Leu Lys Ile Val Arg Ala Asn Lys Lys Ser Asp Arg
 1               5                  10                  15
Lys Leu Asp Lys Thr Tyr Leu Trp Glu Ser Tyr Leu His Gln Phe Glu
            20                  25                  30
Lys Gly Lys Thr Ser Phe Ile Pro Val Glu Ala Phe Asn Arg Asn Leu
        35                  40                  45
Thr Val Asn Phe Asn Glu Cys Val Lys Glu Gly Val Ile Phe Glu Thr
```

```
    50                  55                  60
Val Val His Asp Tyr Asp Lys Asn Cys Asp Ser Ile Gln Val Arg Trp
65                  70                  75                  80
Phe Ala Arg Ile Glu Lys Val Cys Gly Tyr Arg Val Leu Ala Gln Phe
                85                  90                  95
Ile Gly Ala Asp Thr Lys Phe Trp Leu Asn Ile Leu Ser Asp Asp Met
            100                 105                 110
Phe Gly Leu Ala Asn Ala Ala Met Ser Asp Pro Asn Met Asp Lys Ile
        115                 120                 125
Val Tyr Ala Ser Pro Leu Ala Ile Asn Glu Glu Tyr Gln Asn Asp Met
    130                 135                 140
Val Asn Tyr Val Asn Asn Cys Ile Asp Gly Glu Ile Val Gly Gln Thr
145                 150                 155                 160
Ser Leu Ser Pro Lys Phe Asp Glu Gly Lys Ala Leu Leu Ser Lys His
                165                 170                 175
Arg Phe Lys Val Gly Gln Arg Leu Glu Leu Leu Asn Tyr Ser Asn Ser
            180                 185                 190
Thr Glu Ile Arg Val Ala Arg Ile Gln Glu Ile Cys Gly Arg Arg Met
        195                 200                 205
Asn Val Ser Ile Thr Lys Lys Asp Phe Pro Glu Ser Leu Pro Asp Ala
    210                 215                 220
Asp Asp Asp Arg Gln Val Phe Ser Ser Gly Ser Gln Tyr Trp Ile Asp
225                 230                 235                 240
Glu Gly Ser Phe Phe Ile Phe Pro Val Gly Phe Ala Ala Val Asn Gly
                245                 250                 255
Tyr Gln Leu Asn Ala Lys Lys Glu Tyr Ile Glu His Thr Asn Lys Ile
            260                 265                 270
Ala Gln Ala Ile Lys Asn Gly Glu Asn Pro Arg Tyr Asp Ser Asp Asp
        275                 280                 285
Val Thr Phe Asp Gln Leu Ala Lys Asp Pro Ile Asp Pro Met Ile Trp
    290                 295                 300
Arg Lys Val Lys Val Gly Gln Lys Phe Glu Leu Ile Asp Pro Leu Ala
305                 310                 315                 320
Gln Gln Phe Asn Asn Leu His Val Ala Ser Ile Leu Lys Phe Cys Lys
                325                 330                 335
Thr Glu Gly Tyr Leu Ile Val Gly Met Asp Gly Pro Asp Ala Leu Glu
            340                 345                 350
Asp Ser Phe Pro Ile His Ile Asn Asn Thr Phe Met Phe Pro Val Gly
        355                 360                 365
Tyr Ala Glu Lys Tyr Asn Leu Glu Leu Val Pro Pro Asp Glu Phe Lys
    370                 375                 380
Gly Thr Phe Arg Trp Asp Glu Tyr Leu Glu Lys Glu Ser Ala Glu Thr
385                 390                 395                 400
Leu Pro Leu Asp Leu Phe Lys Pro Met Pro Ser Gln Glu Arg Leu Asp
                405                 410                 415
Lys Phe Lys Val Ile Leu Ile Ser Lys Arg Val Gly Leu Arg Leu Glu
            420                 425                 430
Ala Ala Asp Met Cys Glu Asn Gln Phe Ile Cys Pro Ala Thr Val Lys
        435                 440                 445
Ser Val His Gly Arg Leu Ile Asn Val Asn Phe Asp Gly Trp Asp Glu
    450                 455                 460
Glu Phe Asp Glu Leu Tyr Asp Val Asp Ser His Asp Ile Leu Pro Ile
465                 470                 475                 480
Gly Trp Cys Glu Ala His Ser Tyr Val Leu Gln Pro Pro Lys Lys Tyr
                485                 490                 495
Asn Tyr
```

<210> 73
<211> 1497
<212> DNA
<213> Caenorhabditis elegans

<400> 73
atgtctgaat ttctgaaaat tgtcagagct aacaaaaaat cggacagaaa actcgataag 60
acctacttgt gggaatccta tttacatcag ttcgagaaag gaaaaacttc tttcattcca 120
gttgaagcat tcaatcgtaa ccttacagtt aattttaacg aatgcgtgaa ggaaggagtt 180
atcttcgaaa cagtggtcca tgattatgac aagaactgcg attcgattca agtcagatgg 240
tttgcacgaa ttgaaaaagt ttgcggatac agagttctgg ctcagtttat cggagctgac 300
acgaaatttt ggctcaatat tttatcggac gatatgtttg gtttggcaaa cgccgcaatg 360
agtgatccca atatggataa aattgtatat gctccgccgc ttgcaatcaa cgaagaatac 420
caaaatgata tggtaaatta tgtaaataat tgcattgatg gcgaaatcgt cggccaaact 480
tcgctgtctc caaaattcga tgaagggaag gctctcctaa gcaagcatcg tttcaaagtt 540
ggacaacgtc ttgaactatt aaattattcc aattctactg aaatacgcgt agcgcgaatt 600
caagaaatat gtggacgacg aatgaatgta tctatcacaa agaaagactt tcccgaatcg 660
cttccagatg cagatgacga cagacaagtc tttagctctg gatctcaata ttggatagac 720
gagggaagct tcttcatatt tcctgttgga tttgcagcag tcaatggata tcaactaaat 780
gcgaaaaagg aatatattga gcacacaaat aaaattgctc aagcaataaa aaatggagaa 840
aatccaagat atgactcaga cgacgtcaca tttgatcaat tagcaaaaga tccaattgat 900
cccatgattt ggagaaaagt taaggttgga caaaagtttg agctcatcga ccccttggct 960
cagcaattca ataacctcca cgtcgcttcg attctcaaat tttgcaaaac tgaaggatat 1020
cttattgtgg gaatggatgg tccagatgca cttgaagaca gttttcctat tcatatcaat 1080
aatacattta tgttcccagt tggttatgcg gaaaagtata atttggaact tgttccgcca 1140
gatgagttca aaggaacatt cagatgggat gaatacttgg agaaagaatc tgcagaaacc 1200
ctaccgcttg acttgttcaa gccaatgcct tcctaagaga gattagacaa atttaaggta 1260
attctgattt ccaaacgggt aggactacgc cttgaagctg ctgacatgtg tgaaaatcag 1320
tttatttgtc cagctacagt gaaatcagtt catggaagac tgataaatgt caatttcgac 1380
ggctgggatg aagaatttga tgaactgtat gatgtggact cccatgatat tctaccgata 1440
ggatggtgtg aagcgcacag ttatgttcta caacctccga aaaagtacaa ctattga 1497

<210> 74
<211> 1497
<212> DNA
<213> Caenorhabditis elegans

<400> 74
atgtctgaat ttctgaaaat tgtcagagct aacaaaaaat cggacagaaa actcgataag 60
acctacttgt gggaatccta tttacatcag ttcgagaaag gaaaaacttc tttcattcca 120
gttgaagcat tcaatcgtaa ccttacagtt aattttaacg aatgcgtgaa ggaaggagtt 180
atcttcgaaa cagtggtcca tgattatgac aagaactgcg attcgattca agtcagatgg 240
tttgcacgaa ttgaaaaagt ttgcggatac agagttctgg ctcagtttat cggagctgac 300
acgaaatttt ggctcaatat tttatcggac gatatgtttg gtttggcaaa cgccgcaatg 360
agtgatccca atatggataa aattgtatat gctccgccgc ttgcaatcaa cgaagaatac 420
caaaatgata tggtaaatta tgtaaataat tgcattgatg gcgaaatcgt cggccaaact 480
tcgctgtctc caaaattcga tgaagggaag gctctcctaa gcaagcatcg tttcaaagtt 540
ggacaacgtc ttgaactatt aaattattcc aattctactg aaatacgcgt agcgcgaatt 600
caagaaatat gtggacgacg aatgaatgta tctatcacaa agaaagactt tcccgaatcg 660
cttccagatg cagatgacga cagacaagtc tttagctctg gatctcaata ttggatagac 720
gagggaagct tcttcatatt tcctgttgga tttgcagcag tcaatggata tcaactaaat 780
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aatccaagat atgactcaga cgacgtcaca tttgatcaat tagcaaaaga tccaattgat 900
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<213> Caenorhabditis elegans

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